

CNAES

HQP Research & Collaborative Exchange Funding

Visit report

1. Exchange information

Visitor: **Karl A. Lamothe, PhD Candidate, University of Toronto, [ProjectIII-4](#)**

Supervisor: **Don Jackson and Keith Somers**

Host: **W. Bill Keller, Living with Lakes Centre, Laurentian University, Sudbury, ON**

2. Goals

My goal for visiting Bill Keller at the Living with Lakes Centre at Laurentian University was to discuss and collaborate on the third chapter of my PhD regarding the relative resilience of Ontario freshwater zooplankton to anthropogenic acidification. Bill Keller has been sampling freshwater zooplankton from south-central to northern Ontario for over three decades, and much of his work has focused on the recovery of Sudbury lake systems from the historical effects of mining in the region. Today, mining is still a major industry in the Greater Sudbury Area, though emissions have been significantly reduced. My research takes advantage of the many years that Bill spent sampling freshwater zooplankton, and his expertise in sampling methods, zooplankton ecology, and knowledge of the local Sudbury systems has been invaluable.

3. Description of the visit

My trip to Laurentian University took place from March 2 to March 5, 2016. During this time, I spent a couple days at the Living with Lakes Centre, which is a top of the line research facility that surpasses the LEED (Leadership in Energy and Environmental Design) Platinum standard for environmental sustainability. This certification recognizes the greenest buildings in Canada, and highlights the priorities of researchers and scientists at Laurentian to continue to reduce their environmental footprint. The Lakes Centre provides a great facility for a diverse group of people including graduate students, lab technicians, academic researchers, and government scientists.

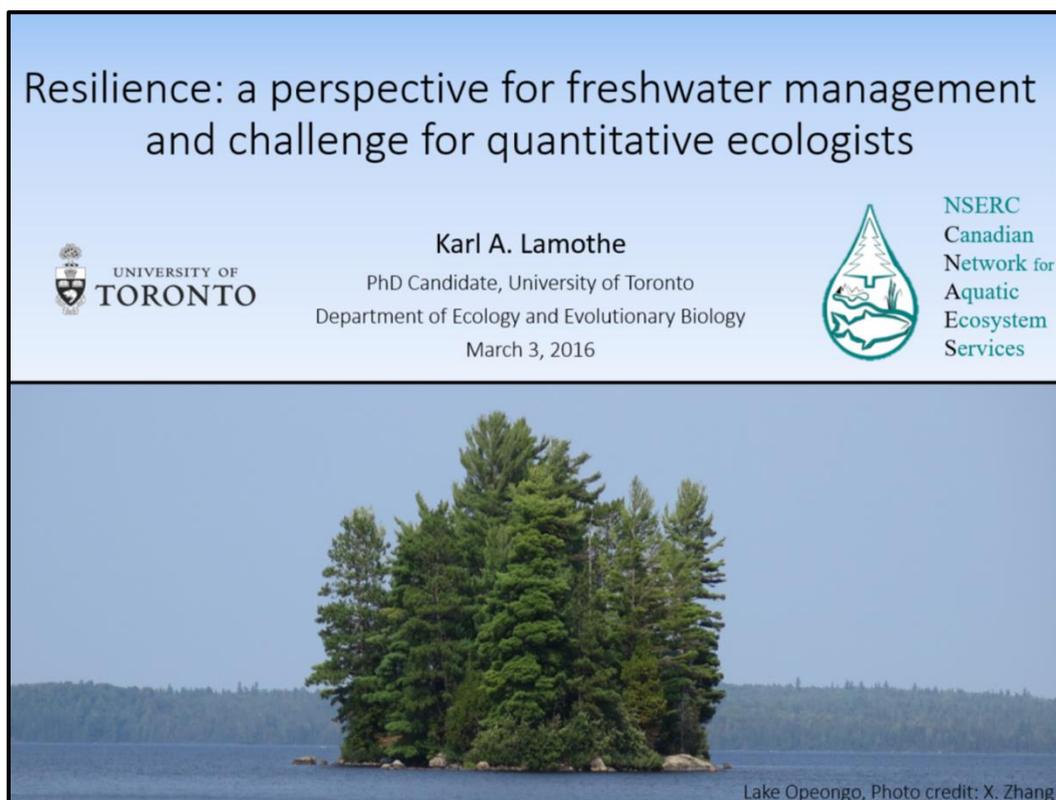


Sudbury from the sky.

On the afternoon of my first day in Sudbury, Bill gave me a tour of the Lakes Centre and University, and we were able to have dinner that night to discuss some of the history of the Sudbury lakes research. The next day, I gave a departmental seminar at the Lakes Centre titled, “Resilience: a perspective for management and challenge for quantitative ecologists,” which highlighted some of the research that I am doing, while emphasizing some of the long-term Sudbury data provided by Bill and his colleagues. I was given some great feedback and questions after my talk, and the ideas have already contributed to the improvement of my research.

After my presentation, and continuing into the next day, I was able to sit down with Bill to discuss some of the decisions that I have had to make when consolidating the Sudbury, Dorset, and Experimental Lakes Area [ELA] freshwater zooplankton community data. Bill confirmed the decisions that I have made, and also informed me of some other contributing variables that may impact my results, such as when fish were reintroduced to the lakes, or whether the lakes are dominated by zooplanktivores. These types of insights are instrumental for interpreting changes within the long-term zooplankton community data-sets (~1970-2010).

Finally, meeting with other graduate students to listen to their experiences, and share my own, is always an important activity when I visit other universities. Therefore, in addition to meeting with Bill and other primary investigators at the Living with Lakes Centre, I spent some time with the graduate students and other NSERC CNAES HQPs (Vanessa Bourne, Gretchen Lescord, and Nicole Novodvorsky) discussing research and experiences. Overall, my trip to Laurentian University was productive and I really benefited from my time discussing my work with Bill and the other researchers at the Living with Lakes Centre.



Introduction Slide, March 3rd Talk